

TITLE: OUTPATIENT PHYSICAL THERAPY PRESENCE AND ACCESS IN MEDICALLY UNDERSERVED CHICAGO COMMUNITIES

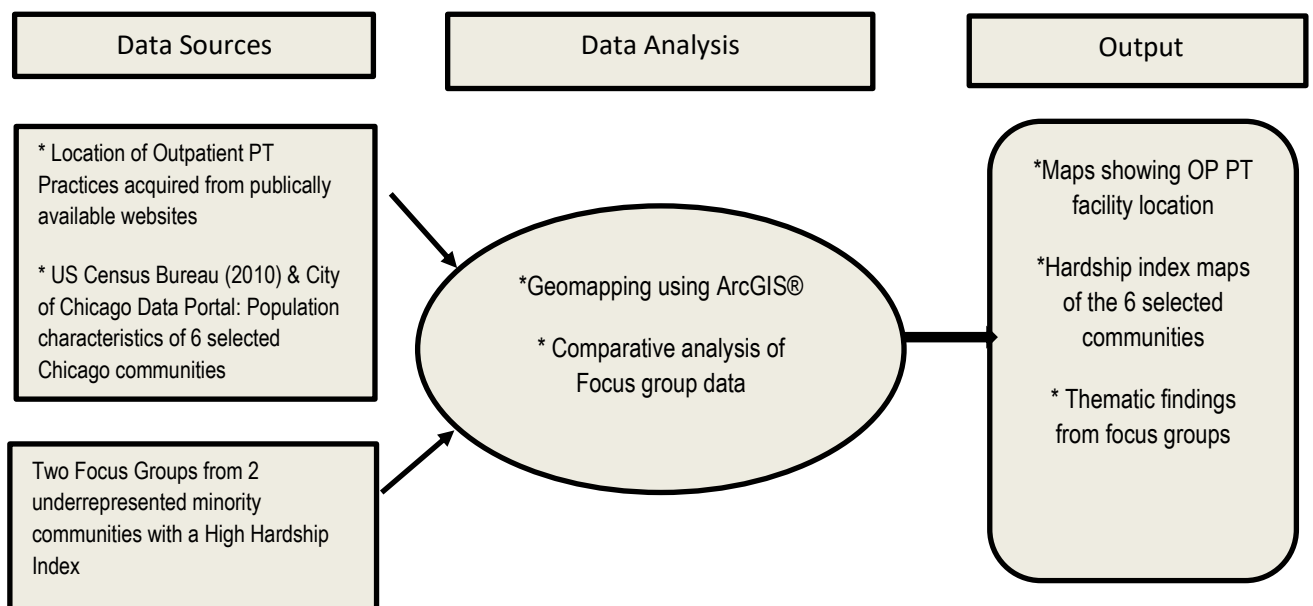
Introduction: Levels of morbidity and mortality in the U.S. continue to be reported as higher among racial and ethnic minorities than among the White population, suggesting a potentially higher demand for PT services among minorities. Similar trends of racial/ethnic health disparities that exist at the national level are also reflected in the City of Chicago. The majority of neighborhoods identified as medically underserved in Chicago are predominantly African American and Hispanic. The designated medically underserved areas receive safety net services that include free or Medicaid primary care, behavioral health and oral care. Aside from hospital facilities, there is limited/no mention of Physical Therapy (PT) services offered by safety net health facilities. Unpublished studies of PT presence in Chicago reported low or no outpatient PT services in several predominately African American neighborhoods.

Purpose: This report describes the innovative application of geographic information systems (GIS) using publically available data to examine the presence of outpatient PT services in medically underserved Chicago communities.

Methods:

Study design: This is a mixed methods study designed to: 1) acquire georeferenced data to portray the current spatial distribution of outpatient PT services in six selected Chicago communities; 2) conduct focus groups to gather residents' perspectives on the PT presence and accessibility in their communities. **Procedures:** Outpatient PT providers were identified through a Google search of PT clinics, health clinics, and hospitals in the selected neighborhoods. Identified providers were telephoned to confirm onsite PT services and record number of physical therapists employed full time and part time. U.S. Census Bureau and City of Chicago Data Portal data were used with ArcGIS® software to map PT presence in relation to population distribution and public transportation features.

Figure 1 summarizes the study design (Adapted from Passalant et al.)



Study Population. Three communities were selected based on racial/ethnic make-up, population and high hardship index (HI). The HI is scored based on six socioeconomic factors found relevant to public health. Three adjacent comparison communities with low HI were then identified. GIS was used to map: 1) the distribution of outpatient PT providers; 2) travel times of community residents to access PT services; and 3) transportation routes. To augment the GIS mapping, two focus groups were held and gathered additional African American or Hispanic community stakeholder input on PT presence and access in their communities.

Results: Geomapping revealed that in each of the two African American communities with high HI there was only one outpatient PT facility. In addition the facilities were hospital-based clinics, staffed with 1 to 3 PT providers, and reported 3-21 weekdays for their next available PT appointment. African American focus group participants reported no PT facilities in their neighborhood and reported experiences of poor quality PT care. Overall focus group participants believed in the role of PT to help patients achieve their optimal level of function. Barriers to PT access included the need to travel outside their community, extended travel times that exacerbated symptoms, financial limitations (high co-pays, limited visits and few willing providers), and a lack of awareness of PT benefits. Hispanic community stakeholder input is still being sought.

Conclusions/Clinical Relevance:

This is the first known report using GIS to describe distribution of outpatient PT services for an urban community in the United States. This report found a lack of outpatient PT providers in two densely-populated, predominately African American Chicago communities. Lack of access to outpatient PT may impact the health and wellbeing of these community residents, who must leave their neighborhoods to receive PT care. Further exploration of care provided in underserved neighborhoods is warranted to ensure accessible and appropriate practice.

KEYWORDS: healthy equity, outpatient physical therapy, African American.

References:

Chicago Department of Public Health. The Chicago Plan for Public Health System Improvement: 2012-2016. A five-year plan for strengthening the health of the city-developed by the Chicago Partnership for public Health. Available at

http://www.cityofchicago.org/dam/city/depts/cdph/policy_planning/CDPHChicagoPlan20122016FINAL.pdf. Accessed July 19, 2016.

Johnson AE, Lavernia C. Breakout session: Ethnic and gender differences in diabetic foot management and amputations. *Clinical Orthopaedics and Related Research*. 2011; 469(7): 1967-70.

McCallum CA. Access to physical therapy services among medically underserved adults: a mixed-method study. *Physical Therapy*. 2010; 90(5):735-747.

Nykiforuk CIJ, Flaman LM. Geographic information systems (GIS) for health promotion and public health: a review. *Health Promotion Practice*. 2011; 12(1):63-73.

O'Connor ML, Lavernia CJ, Nelson CL. AAOS/ORS/ABJS Musculoskeletal Healthcare Disparities Research Symposium. A call to arms: Eliminating Musculoskeletal Healthcare Disparities. *Clinical Orthopaedics and Related Research*. 2011; 469(7):1805-1807.

Passalent L, Borsy E, Landry MD, Cott C. Geographic information systems (GIS): an emerging method to assess demand and provision for rehabilitation services. *Disability and Rehabilitation*. 2013; 35(20):1740-1749.